

**FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
GILBERTON COAL-TO-CLEAN FUELS
AND POWER PROJECT**

GILBERTON, PENNSYLVANIA

Volume 2: Appendices



October 2007

U.S. DEPARTMENT OF ENERGY

COVER SHEET

October 2007

RESPONSIBLE AGENCY

U.S. Department of Energy (DOE)

TITLE*Final* Environmental Impact Statement for the Gilberton Coal-to-Clean Fuels and Power Project**LOCATION**

Gilberton, Pennsylvania

CONTACTS

Additional copies or information concerning this *final* environmental impact statement (EIS) can be obtained from Ms. Janice L. Bell, National Environmental Policy Act (NEPA) Document Manager, U.S. Department of Energy, National Energy Technology Laboratory, 626 Cochran's Mill Road, P.O. Box 10940, Pittsburgh, PA 15236-0940. Telephone: 412-386-4512.
E-mail: janice.bell@netl.doe.gov.

For general information on DOE's NEPA process, contact Ms. Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (*GC-20*), U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-0103. Telephone: 202-586-4600, or leave a toll-free message at 1-800-472-2756.

ABSTRACT

This EIS assesses the potential environmental impacts that would result from a proposed DOE action to provide cost-shared funding for construction and operation of facilities near Gilberton, Pennsylvania, which have been proposed by WMPI PTY, LLC, for producing electricity, steam, and liquid fuels from anthracite coal waste (culm). The project has been selected by DOE under the Clean Coal Power Initiative (CCPI) to demonstrate the integration of coal waste gasification and Fischer-Tropsch (F-T) synthesis of liquid hydrocarbon fuels at commercial scale. The proposed facilities would use a gasifier to convert coal waste to synthesis gas, which would be conveyed to F-T liquefaction facilities for production of liquid fuels and to a combined-cycle power plant. The power plant would use the synthesis gas to drive a gas combustion turbine and exhaust gas from the gas turbine to generate steam from water to drive a steam turbine. Both turbines would generate electricity.

The EIS evaluates potential impacts of the proposed facilities on land use, aesthetics, air quality, geology, water resources, floodplains, wetlands, ecological resources, socioeconomic resources, waste management, human health, and noise. The EIS also evaluates potential impacts on these resource areas for a scenario resulting from the no-action alternative (DOE would not provide cost-shared funding) in which the proposed facilities would not be built or operated.

PUBLIC PARTICIPATION

DOE encourages public participation in the NEPA process. Comments were invited on the Draft EIS after publication of the Notice of Availability in the Federal Register on December 8, 2005. The public comment period ended on February 8, 2006. DOE considered late comments to the extent practicable. DOE conducted two formal public hearings to receive comments on the draft EIS: the first was on January 9, 2006, at Shenandoah Valley Junior/Senior High School in Shenandoah, Pennsylvania, and the second was on January 10, 2006, at D.H.H. Lengel Middle

School in Pottsville, Pennsylvania. An informational session was held prior to each of these hearings for the public to learn more about the proposed project. The public was encouraged to provide oral comments at the hearings and to submit written comments to DOE by the close of the comment period on February 8, 2006. In preparing the final EIS, DOE considered both oral and written comments.

On January 12, 2007, a Notice of Availability was published in the Federal Register to invite comments on the Supplement to the Draft EIS (DOE/EIS-0357D-S1) that was issued to correct estimates of CO₂ emissions from the proposed plant that were published in the draft EIS, and to provide additional information regarding CO₂ releases and CO₂-related cumulative impacts. The comment period for the Supplement to the Draft EIS ended on February 27, 2007. In preparing this final EIS, DOE considered all written comments on the Supplement to the Draft EIS.

CHANGES FROM THE DRAFT EIS

All changes, which have been made to improve the usefulness of the document to the decision maker and to be responsive to the public, are shown in boldface italics font (as is this paragraph), except for Appendix E, which contains the Supplement to the Draft EIS, Appendices D and F, which contain the comments and responses on the draft EIS and the Supplement to the Draft EIS, respectively, and Appendix G, which contains a comparison of the potential impacts of petroleum coke and anthracite culm use. Appendices D through G are presented in Volume 2 of this EIS.

TABLE OF CONTENTS

VOLUME 2: APPENDICES

APPENDIX A	CONSULTATION LETTER UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT	A-1
APPENDIX B	CONSULTATION LETTER UNDER SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT	B-1
APPENDIX C	ORGANIZATIONAL CONFLICT OF INTEREST STATEMENT	C-1
<i>APPENDIX D</i>	<i>TRANSCRIPTS OF AND RESPONSES TO THE PUBLIC HEARINGS AND PUBLIC COMMENT LETTERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT.</i>	<i>D-1</i>
<i>APPENDIX E</i>	<i>SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE GILBERTON COAL-TO-CLEAN FUELS AND POWER PROJECT ...</i>	<i>E-1</i>
<i>APPENDIX F</i>	<i>PUBLIC COMMENTS ON THE SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT AND RESPONSES</i>	<i>F-1</i>
<i>APPENDIX G</i>	<i>COMPARISON OF THE POTENTIAL IMPACTS OF PETROLEUM COKE AND ANTHRACITE CULM USE AT THE PROPOSED GILBERTON COAL- TO-CLEAN FUELS AND POWER PROJECT.....</i>	<i>G-1</i>

APPENDIX A

CONSULTATION LETTER UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850



May 4, 2007

Janice Bell
U.S. Department of Energy
3610 Collins Ferry Road
Morgantown, WV 26507-0880

RE: USFWS Project #2007-0858

Dear Ms. Bell:

This responds to your letter of April 27, 2007, requesting information about federally listed and proposed endangered and threatened species within the area affected by the proposed Gilberton Coal-to-Clean Fuels and Power project located in Schuylkill County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

Except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to occur within the project impact area. Therefore, no biological assessment or further consultation under the Endangered Species Act is required with the Fish and Wildlife Service. This determination is valid for two years from the date of this letter. If the proposed project has not been fully implemented prior to this, an additional review by this office will be necessary. Also, should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

This response relates only to endangered or threatened species under our jurisdiction based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Requests for information regarding State-listed endangered or threatened species should be directed to the Pennsylvania Game Commission (birds and mammals), the Pennsylvania Fish and Boat Commission (fish, reptiles, amphibians and aquatic invertebrates), and the Pennsylvania Department of Conservation and Natural Resources (plants).

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Pamela Shellenberger of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", with a long horizontal flourish extending to the right.

David Densmore
Supervisor

Enclosure

Federally Listed, Proposed, and Candidate Species in Pennsylvania
(revised August 17, 2006)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status¹</u>	<u>Distribution (Counties and/or Watersheds)</u>
MAMMALS			
Indiana bat	<i>Myotis sodalis</i>	E	Hibernacula: Armstrong, Beaver, Blair, Centre, Fayette, Lawrence, Luzerne, Mifflin and Somerset Co. Maternity sites: Blair, Berks and York Co.
BIRDS			
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Nesting: Adams, Armstrong, Berks, Bradford, Bucks, Butler, Cameron, Centre, Chester, Columbia, Crawford, Dauphin, Erie, Forest, Fulton, Huntingdon, Lancaster, Luzerne, Lycoming, McKean, Mercer, Monroe, Montgomery, Montour, Northampton, Northumberland, Pike, Sullivan, Tioga, Venango, Warren, Wayne, Westmoreland and York Co. Winter: near ice-free sections of rivers, lakes and reservoirs (e.g., Delaware River, Pymatuning Reservoir)
Piping plover	<i>Charadrius melodus</i>	E	Designated critical habitat on Presque Isle (Erie Co.). Migratory. No nesting in PA since 1950s, but recent colonization attempts at Presque Isle
REPTILES			
Bog turtle	<i>Clemmys (Glyptemys) muhlenbergii</i>	T	Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York Co. <i>Historically found in Crawford, Mercer and Philadelphia Co.</i>
Eastern massasauga rattlesnake	<i>Sistrurus catenatus catenatus</i>	C	Butler, Crawford, Mercer and Venango Co. <i>Historically found in Allegheny and Lawrence Co.</i>
MUSSELS			
Clubshell	<i>Pleurobema clava</i>	E	French Creek and Allegheny River (and some tributaries) in Armstrong, Clarion, Crawford, Erie, Forest, Mercer, Venango, and Warren Co.; Shenango River (Mercer and Crawford Co.) <i>Has not been found recently in 13 streams of historical occurrence in Butler, Beaver, Fayette, Greene, Indiana, Lawrence, and Westmoreland Co.</i>
Dwarf wedgemussel	<i>Alasmodonta heterodon</i>	E	Delaware River (Pike and Wayne Co.) <i>Has not been found recently in streams of historical occurrence in the Delaware River watershed (Bucks, Carbon, Chester, Philadelphia Co.) or Susquehanna River watershed (Lancaster Co.)</i>

US Fish and Wildlife Service
315 South Allen Street, Suite 322, State College, Pennsylvania 16801

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status¹</u>	<u>Distribution (Counties and/or Watersheds)</u>
MUSSELS (continued)			
Northern riffleshell	<i>Epioblasma torulosa rangiana</i>	E	French Creek and Allegheny River (and some tributaries) in Armstrong, Clarion, Crawford, Erie, Forest, Mercer, Venango, and Warren Co. <i>Has not been found recently in streams of historical occurrence, including: Shenango River (Lawrence Co.), Conewango Creek (Warren Co.)</i>
Rayed bean	<i>Villosa fabalis</i>	C	French Creek and Allegheny River (Armstrong, Clarion, Crawford, Erie, Forest, Mercer, Venango, Warren Co.); Cussewago Creek (Crawford Co.). <i>Has not been found recently in 5 streams of historical occurrence in Armstrong, Lawrence, Mercer and Warren Co.</i>
Sheepnose	<i>Plethobasus cyphus</i>	C	Allegheny River (Forest and Venango Co.). <i>Has not been found recently in streams of historical occurrence, including: Allegheny River (Armstrong Co.), Beaver River (Lawrence Co.), Ohio River (Allegheny and Beaver Co.), and Monongahela River (Washington Co.)</i>
FISH			
Shortnose sturgeon ²	<i>Acipenser brevirostrum</i>	E	Delaware River and other Atlantic coastal waters
PLANTS			
Northeastern bulrush	<i>Scirpus ancistrochaetus</i>	E	Adams, Bedford, Blair, Carbon, Centre, Clinton, Columbia, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Lehigh, Lycoming, Mifflin, Monroe, Perry, Snyder, Tioga, and Union Co. <i>Historically found in Northampton Co.</i>
Small-whorled pogonia	<i>Isotria medeoloides</i>	T	Centre, Chester and Venango Co. <i>Historically found in Berks, Greene, Monroe, Montgomery and Philadelphia Co.</i>

¹ E = Endangered; T = Threatened; P = Proposed for listing; C = Candidate

² Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service